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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,957	11/24/2003	Jonah Harley	10030477-1	9406
57299	7590	10/31/2007		
Kathy Manke Avago Technologies Limited 4380 Ziegler Road Fort Collins, CO 80525			EXAMINER LIANG, REGINA	
			ART UNIT 2629	PAPER NUMBER
			NOTIFICATION DATE 10/31/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

avagoip@system.foundationip.com  
kathy.manke@avagotech.com  
scott.weitzel@avagotech.com

**Office Action Summary**

Application No.

10/723,957

Applicant(s)

HARLEY ET AL.

Examiner

Regina Liang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4, 8, 16 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4, 8, 16, 25-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/18/07 has been entered. Claims 4, 8, 16, 25-30 are pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

3. Claims 8, 27, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherriff et al (GB 2 247 938 hereinafter Sherriff) in view

As to claim 8, Figs. 1-5, 14-16 of Sherriff discloses a pointing device (puck), comprising: a surface having a puck field of motion defined thereon (12 in Fig. 1; 62 in Fig. 14); the puck being confined to move within the puck field of motion, a position detector (capacitor plates 17, 18 in Figs. 3-5; capacitor plates 67, 68 in Figs. 15-16) configured to measure the position of the puck in the puck field of motion, the position detector comprising surface electrodes (18 in Fig. 3, 5; 68 in Fig. 16) disposed on or near the surface and the puck electrode (17 in Fig. 3, 4; 67 in Fig. 15), the position detector further being configured to measure the capacitance between

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selected ones of the electrodes and thereby permit the position of the puck in respect of the surface to be determined (page 5, lines 6-16 for example).

Sherriff also discloses the moveable puck comprising at least one user sensor ("click" switches 41, 69, 81, 91, Figs. 11, 14, 17, 19). Sherriff does not disclose the user sensor is disposed between an upper surface and a lower surface and configured to generate a first output signal when the upper surface is deflected downwardly by the user into a first position and to generate a second output signal when the upper surface is deflected by the user into a second position. However, Armstrong teaches a button or switch (39 in Figs 13-15 for example) comprising a sensor (52, 54) is disposed between an upper surface (44, 56) and a lower surface (38) and configured to generate a first output signal when the upper surface is deflected downwardly by the user into a first position and to generate a second output signal when the upper surface is deflected by the user into a second position (see Fig. 15, steps 90 and 98 in Fig. 20, and col. 22, lines 35 to col. 23, line 22). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the user sensor of Sherriff to be a pressure-sensitive variable sensor as taught by Armstrong and to be disposed between the upper surface and the lower surface such that the user is able to provide variable controls dependent upon the degree of depressive pressure user applied to the button.

As to claim 27, Sherriff as modified by Armstrong does not disclose the first output signal is configured to actuate tracking of a cursor. However, in order to prevent an unintentional movement of the puck to cause cursor movement, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the user sensor of Sherriff as modified by Armstrong to output the first output signal configured to actuate tracking

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of a cursor when user applying the first downward force such that an unintentional cursor movement is prevented.

As to claim 28, Sherriff discloses applying the pressure to the switch (41, 69, 81, 91, Figs. 11, 14, 17, 19) to actually create a “click” switch (this corresponds to the second output signal is configured to implement a “click” function).

4. Claims 4, 25, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Sherriff and Armstrong, and further in view of Maatta et al (US 6,762,748 hereinafter Maatta).

As to claim 4, note the discussion of claim 8 above. Figs. 7 and 8 of Sherriff disclose the device having a restoring mechanism (springs) that returns the puck to a predetermined area (central position) in the puck field of motion. Sherriff as modified by Armstrong differs from the claim in that the restoring mechanism not having a first magnet and a second magnet. However, Maatta teaches a restoring mechanism in a pointing device comprises a first magnet (M1) (in Figs. 2, 4a) and a second magnet (M2) for returning the puck to the centered position (see Figs. 2, 4a, and col. 5, lines 24-53; Maatta states “the two attracting magnets exhibit a tendency to return to the state of maximum combined flux thus the magnets will tend to return to this centered position despite any applied external forces”). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the restoring mechanism of Sherriff as modified by Armstrong to employ the magnets as taught by Maatta in order to provide a compact low profile pointing device (col. 1, lines 7-9 of Maatta).

As to claim 25, Sherriff as modified by Armstrong and Maatta does not disclose the first output signal is configured to actuate tracking of a cursor. However, in order to prevent an

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unintentional movement of the puck to cause cursor movement, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the user sensor of Sherriff as modified by Armstrong and Maatta to output the first output signal configured to actuate tracking of a cursor when user applying the first downward force such that an unintentional cursor movement is prevented.

As to claim 26, Sherriff discloses applying the pressure to the switch (41, 69, 81, 91, Figs. 11, 14, 17, 19) to actually create a “click” switch (this corresponds to the second output signal is configured to implement a “click” function).

5. Claims 16, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherriff, Armstrong and Maatta, and further in view of Yoshikawa et al (US 5,815,139 hereinafter Yoshikawa).

As to claim 16, note the discussion of claim 4 above. Sherriff as modified by Armstrong and Maatta does not disclose the position detector measures current flowing between selected ones of the electrodes. However, Fig. 2 of Yoshikawa teaches a pointing device comprising a resistance position detector (tablet sheet 6) for measuring current flowing between selected ones of the electrodes (60a, 60b, 61a, 61b; see col. 6, lines 28-67). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pointing device of Sherriff as modified by Armstrong and Maatta to have a position detector for measuring the current flowing between selected ones of the electrodes as taught by Yoshikawa because the capacitance position detector and the resistance position detector are alternative for each other and because this will enhance the degree of freedom for input operation of the relative

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manipulated variable input device and hence will improve its operability (col. 11, lines 9-11 of Yoshikawa).

As to claim 29, Sherriff as modified by Armstrong, Maatta and Yoshikawa does not disclose the first output signal is configured to actuate tracking of a cursor. However, in order to prevent an unintentional movement of the puck to cause cursor movement, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the user sensor of Sherriff as modified by Armstrong, Maatta and Yoshikawa to output the first output signal configured to actuate tracking of a cursor when user applying the first downward force such that an unintentional cursor movement is prevented.

As to claim 30, Sherriff discloses applying the pressure to the switch (41, 69, 81, 91, Figs. 11, 14, 17, 19) to actually create a "click" switch (this corresponds to the second output signal is configured to implement a "click" function).

### ***Response to Arguments***

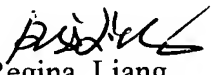
6. Applicant's arguments with respect to claims 4, 8, 16, 25-30 have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Regina Liang  
Primary Examiner  
Art Unit 2674

10/22/07